



AIR QUALITY IN THE EU

Facts and Figures

Poor air quality can mean premature death

Heart disease and stroke are the main reasons for air pollution-linked premature death, accounting for 80 % of cases of pollution-related early death. Lung diseases and lung cancer are the next most common air pollution-related illnesses, but it can also cause other respiratory and cardiovascular diseases. It can impact fertility and pregnancy, and has been linked to negative effects on brain development in infants and children, which can affect their progress at school. New evidence is also suggesting that there could be a link between air pollution and type 2 diabetes in adults, ageing, Alzheimer's disease and dementia.

Around 400 000 premature deaths in Europe are due to high concentrations of particulate matter and 75 000 premature deaths are caused by nitrogen dioxide pollution.

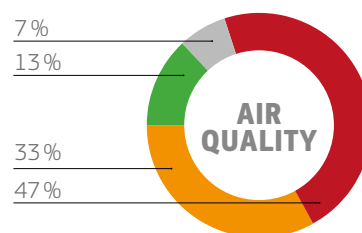
Air pollution also affects ecosystems, agricultural crops and forests and buildings. [Source: Air Quality in Europe 2017, European Environmental Agency]



How concerned are Europeans about air pollution and how to tackle it

Air pollution (46 %) is the second biggest environmental concern for Europeans after climate change (51 %).

41 % of Europeans think that applying stricter pollution controls on industrial and energy-production activities are the most effective way to tackle air pollution. 29 % favour applying stricter controls on emissions from new vehicles, and 28 % think that providing more information to the public on the health and environmental consequences of air pollution is the most effective way to tackle the problem. [Source: Special Eurobarometer 468 Report, Attitudes of European citizens towards the environment]



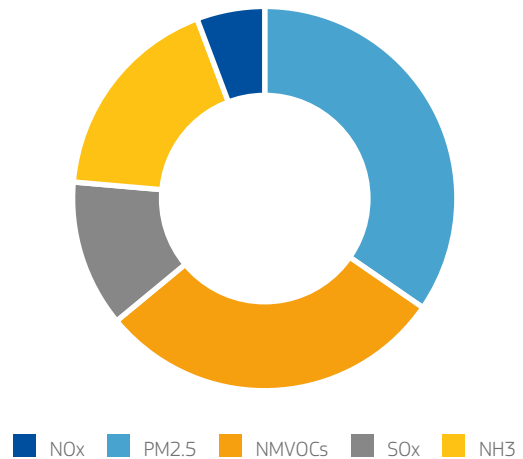
Although air quality in the European Union continues to improve, nearly half of Europeans (47 %) think that air quality has deteriorated in their country over the last 10 years, 33 % say that air quality has stayed the same, 13 % say it has improved and 7 % say they don't know.

The biggest pollutants, their sources, and trends

The main air pollutants are: particulate matter, sulphur oxides (SO_x), nitrogen oxides (NO_x), ammonia, volatile organic compounds and ozone. Particulate matter is typically classified into PM₁₀ and PM_{2.5}, depending on its diameter. There are natural sources of PM like sea salt, dust and volcanic ash. Human-generated sources include fuel combustion for power, heating and transport, waste incineration and agriculture. Particulate matter is also generated by the reaction of ammonia with nitrogen oxides or sulphur oxides.

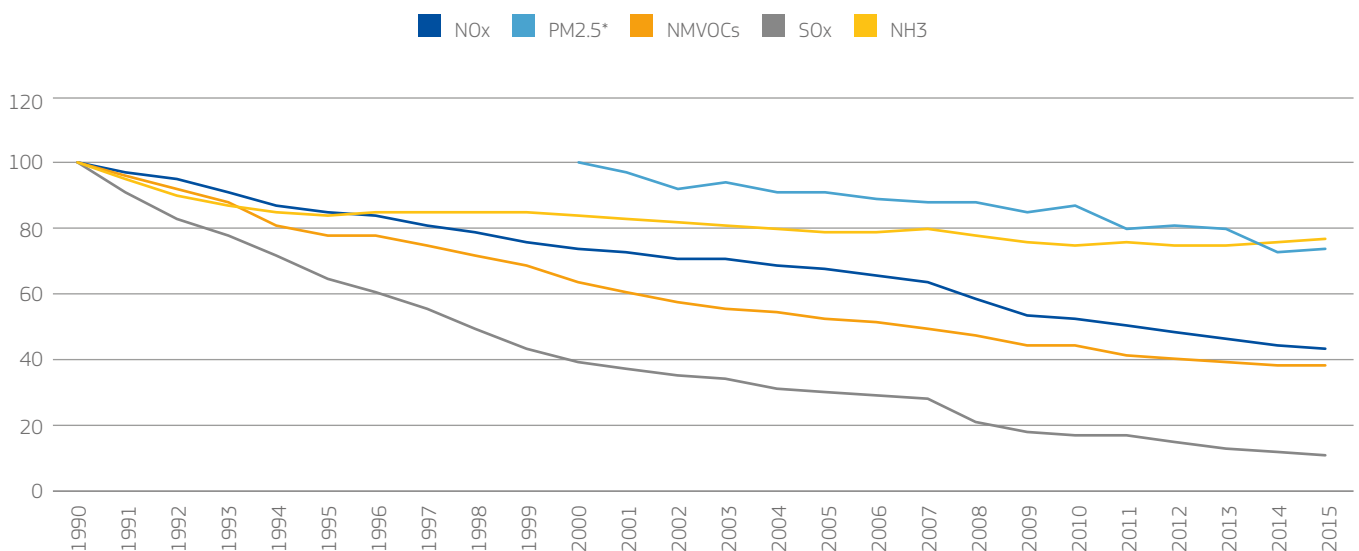
Nitrogen oxides and sulphur oxides, meanwhile, are produced during combustion processes like power generation, industry and household heating. Sulphur oxides can also be emitted by natural sources like volcanoes.

MAIN POLLUTANTS IN THE EU (2015)



SOURCE: <https://www.eea.europa.eu/data-and-maps/dashboards/necd-directive-data-viewer>

POLLUTION TRENDS IN THE EU



* Emission reporting requirement under NEC Directive from 2000 onwards.



EU rules to improve air quality

The EU Clean Air policy comprises three different parts:

- a — ambient air quality standards;
- b — national emission limits;
- c — emission standards for key pollution sources, e.g. via legislation on industrial and vehicle emissions.

THE AMBIENT AIR QUALITY DIRECTIVES

These two Directives define and establish standards for ambient air quality for key pollutants which have to be reached by all Member States across their territories.

Where these standards are not met, Member States have to prepare and implement air quality plans and measures. It is left to the Member States to decide on the means to achieve these standards, but they have to make sure that exceedance periods are kept as short as possible.

The Directives also set common methods and criteria to assess air quality. Member States have to report 'up to date' air quality measurements, as well as information on their plans and programmes to the European Commission and the general public (via Internet, radio, TV, press).

NATIONAL EMISSIONS CEILINGS DIRECTIVE

It sets emission reduction commitments for the main air pollutants. The most recent update to these rules, in 2016, requires Member States to take measures to cut emissions of the five main pollutants by specified amounts between 2020 and 2030. If fully implemented, this will reduce premature deaths by around 50% by 2030 compared with 2005.

EMISSION STANDARDS FOR KEY POLLUTION SOURCES

This covers source-specific legislation, for example on industrial emissions, vehicle emissions and fuel quality standards. In July 2017 new rules for large combustion plants, one of the biggest sources of air pollution, were adopted. These stricter EU-wide standards will have to be met by mid-2021.

Applying the rules – and what happens if they are not properly applied

National governments and authorities are responsible for putting the EU rules in place and making sure they are applied. The European Commission checks whether they are being applied correctly. It can launch infringement proceedings if rules are consistently not being met.

Since 2000 emissions of all the main pollutants have steadily decreased, but 1 out of 8 citizens in urban areas across Europe are still exposed to air pollution above the EU limits. Therefore, the European Commission is taking legal action against Member States, focussing on particulate matter (PM₁₀), and nitrogen dioxide (NO₂). There are currently 30 infringement cases ongoing in 20 EU Member States.

PM₁₀ – 16 countries are facing infringement cases – Belgium, Bulgaria, the Czech Republic, Germany, Greece, Spain, France, Hungary, Italy, Latvia, Poland, Portugal, Romania, Slovakia, Slovenia and Sweden.

The European Court of Justice has passed a ruling as regards PM₁₀ exceedances in Bulgaria. In April 2017, the Court confirmed that Bulgaria had not complied with the limit values for PM₁₀ systematically and continuously from 2007 to 2014 in all urban areas. The Court also said that Bulgaria did not apply the necessary air quality plans to reduce PM₁₀.

NO₂ – 13 countries are facing infringement cases – Austria, Belgium, the Czech Republic, Denmark, France, Germany, Hungary, Italy, Luxembourg, Poland, Portugal, Spain and the UK.

SO₂ – One country is facing action – Bulgaria.

In addition to these cases, Romania and Slovakia have received a letter of warning to ensure proper monitoring of air quality throughout their whole territory.